IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

IPA TECHNOLOGIES, INC.,
 	
       Plaintiff,
  v.
 	
AMAZON.COM, INC. and AMAZON DIGITAL SERVICES, LLC,
 	
       Defendants.
	C.A. No. 16-1266-RGA

IPA TECHNOLOGIES, INC.'S ANSWERING BRIEF IN OPPOSITION TO DEFENDANTS' MOTION TO DISMISS PURSUANT TO FED. R. CIV. P. 12(b)(6)

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I.   INTRODUCTION

Defendants (collectively, "Amazon") begin their motion by incorrectly asserting that the three patents-in-suit claim systems that can "understand and act on" spoken requests "without contributing any actual technology for achieving it." Mot. at 1. Even ignoring Amazon's overly simplistic and incorrect characterization of the claims, this could not be further from the truth. The patents-in-suit are part of the portfolio of patents that led to the development of Siri, which is licensed by Apple and was the first personal digital assistant of its kind. Indeed, Amazon credits Siri in its introduction (along with other digital personal assistants that did not come to market until years after Siri), but fails to mention that *these are the Siri patents*. The inventors of the patents-in-suit and the inventors of Siri are one and the same. Amazon's bald assertion that these inventors contributed nothing to this field of technology is wrong by its own account.

Amazon's assertion that the claims are directed to the idea of "responding to a spoken request" is also wrong. It is clear from the face of the patents that the claims are necessarily rooted in computer technology and present unique solutions for quickly and efficiently *navigating network-based electronic data sources* in response to spoken input requests, as opposed to requiring users to conform to the step-by-step, hierarchical menu structures found in navigational systems existing at the time of the invention. The claimed inventions further resolve errors and ambiguities in spoken input in a user-friendly manner by engaging the user in a multi-modal dialogue. The only possible way to characterize the claims as Amazon has done is to strip out essential claim language and ignore the benefits and advances over the prior art. The extreme oversimplification of the claims that underlies Amazon's entire argument is improper and has been consistently rejected by the Federal Circuit.

Because the claims provide a specific technological solution to the problem of navigating

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complex electronic databases, they do not preempt the purported abstract idea of "responding to a spoken request." Amazon's efforts to oversimplify or unnaturally partition the claims do not satisfy its heavy burden in asserting invalidity, especially at the pleading stage.

II.   BACKGROUND

A.   The Groundbreaking Development of Siri

SRI International, Inc. ("SRI"), the developer of the patents-in-suit, is a not-for-profit research institute conducting client-supported research and development for government agencies, commercial businesses, foundations, and other organizations. Complaint ¶ 8. Among its many areas of research, SRI has engaged in fundamental research and development related to personal digital assistants and speech-based navigation of electronic data sources. *Id.* ¶ 9.

SRI's innovative work on personal digital assistants was a key area of development in one of the world's largest artificial intelligence projects, the Cognitive Assistant that Learns and Organizes ("CALO"). The vision for the SRI-led CALO project, funded by the U.S. Defense Advanced Research Projects Agency ("DARPA"), was to create groundbreaking software that could revolutionize how computers support decision-makers. *Id.* ¶ 10. SRI's work on personal digital assistants and speech-based navigation of electronic data sources, which started before the launch of the CALO project, developed further as part of the project. SRI's engineers were awarded numerous patents on their groundbreaking inventions. *Id.* ¶ 11.

To bring this technology to the marketplace, SRI formed Siri, Inc. in 2007, and granted it a license to the patent portfolio, including the patents-in-suit. The technology was demonstrated as an iPhone app at technology conferences and later released as an iPhone 3GS app in February 2010. In April 2010, Apple Inc. acquired Siri, Inc. And in 2011, the Siri personal digital assistant

was released as an integrated feature of the iPhone 4S[1], and has since revolutionized the way humans interact with electronic devices. *Id.* ¶¶ 12–13.

B. The Asserted Patents

Plaintiff IPA Technologies, Inc. ("IPA"), owner by assignment of the Siri patent portfolio, has asserted three of the Siri patents against Amazon: U.S. Patent No. 6,742,021 ("'021 patent"), No. 6,523,061 ("'061 patent"), and No. 6,757,718 ("'718 patent"). The inventions relate generally to "the navigation of electronic data by means of spoken natural language requests, and to feedback mechanisms and methods for resolving the errors and ambiguities that may be associated with such requests." '021 patent at 1:15–19.

The claimed inventions were born from the inventors' recognition that, "[a]s global electronic connectivity continues to grow, and the universe of electronic data potentially available to users continues to expand, there is a growing need for information navigation technology that allows relatively naïve users to navigate and access desired data by means of natural language input." '021 patent[2] at 1:20–25. The inventors further recognized that "[i]n many of the most important markets—including the home entertainment arena, as well as mobile computing—spoken natural language input is highly desirable, if not ideal." *Id.* at 1:25–28. However, "the existing navigational systems for browsing electronic databases and data warehouses (search engines, menus, etc.), have been designed without navigation via spoken natural language as a specific goal." *Id.* at 1:47–50. Instead, they "assume[d] text and mouse-click inputs (or in the case of TV remote controls, even less)." *Id.* at 1:50–54.

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[1] Notably, the other personal digital assistants mentioned in Amazon's motion (Amazon's Alexa, Microsoft's Cortana, and Google Voice) did *not* exist at the time of the invention, and came to market only years later.

[2] All three asserted patents are related and have the same specification. Accordingly, all citations to the '021 patent specification also apply to the '061 and '718 patents.

The inventors understood that a navigational structure that simply recognized voice commands would not be sufficient to satisfy their objectives because users would be required to learn a highly-specialized command language or format—essentially the spoken equivalent of a button/click input. *Id.* at 1:54–63. The inventors thus sought to invent something that would allow a user to speak directly in terms of what the user actually wants, i.e., in natural language, instead of speaking in terms of "arbitrary navigational structures." *Id.* at 1:63–2:3. The inventors also recognized that errors and ambiguities would inevitably arise from interpreting spoken commands, and so "an approach [was] needed for handling and resolving such errors and ambiguities in a rapid, user-friendly, non-frustrating manner." *Id.* at 2:3–12. The problems that the inventors sought to address are summed up as follows:

> What is needed is a methodology and apparatus for rapidly constructing *a voice-driven front-end atop an existing, non-voice data navigation system*, whereby users can interact by means of intuitive *natural language input not strictly conforming to the step-by-step browsing architecture of the existing navigation system*, and wherein any *errors or ambiguities in user input are rapidly and conveniently resolved*. The solution to this need should be compatible with the constraints of a multi-user, distributed environment such as the Internet/Web or a proprietary high-bandwidth content delivery network; a solution contemplating one-at-a-time user interactions at a single location is insufficient, for example.

Id. at 2:13–24 (emphasis added).

The patents address these needs "by providing a system, method, and article of manufacture for navigating network-based electronic data sources in response to spoken input requests." *Id.* at 2:27–30. Furthermore, the invention handles the errors and ambiguities in spoken requests in a "user-friendly manner" by means of a "multi-modal dialogue," which gleans as much information from the initial interpretation of the user's spoken request as possible to construct a navigation query, solicits additional information from the user as necessary via multimodal input (i.e., other input means in addition to spoken input) to refine the navigation query, and repeats this process until the desired information is retrieved from the electronic data

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source and transmitted to the user device. *Id.* at 2:44–67. For example, instead of navigating a complex home entertainment system by using a traditional remote-control to click and scroll through multiple layers of menus, the invention allows a user to speak a command (e.g., "I'd like to see a Western film directed by Clint Eastwood"). Instead of simply rejecting the spoken command or defaulting to traditional input modes in the event of an error or ambiguity, the system engages in a multi-modal dialogue with the user, such as presenting the user with a list of Clint Eastwood films which can then be selected for viewing by using either the remote control or another spoken command. *See id.* at 1:28–2:10, 10:40–12:8. The invention thus allows the user to rapidly access and search a "dizzying range of database content choices." *Id.* at 1:37–41.

The asserted patents each claim priority to an application filed in 1999. During prosecution of the '021 patent, the applicants added clarifying language to the claims to distinguish the invention over the prior art. Specifically, the applicants pointed to the following limitation from claim 1: "soliciting additional input from the user, including user interaction in a non-spoken modality different than the original request without requiring the user to request said non-spoken modality." This multi-modal feedback approach to handling errors and ambiguities in the user's spoken requests is also reflected in dependent claim 4 of the '061 patent, and dependent claim 4 of the '718 patent.[3] The '061 patent issued in February 2003, and the '021 and '728 patents issued in May and June 2004, respectively.

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[3] For claim 1 of the '061 patent, the following limitations regarding the use of agents distinguished the claimed invention: "routing the navigation query to at least one agent, wherein the at least one agent utilizes the navigation query to select a portion of the electronic data source; and invoking a user interface agent for outputting the selected portion of the electronic data source to the user, wherein a facilitator manages data flow to the user, wherein a facilitator manages data flow among multiple agents and maintains a registration of each of said agents' capabilities." And for claim 1 of the '718 patent, the inventors added the limitations: "receiving a spoken request for desired information from the user utilizing the mobile information appliance of the user, wherein said mobile information appliance comprises a portable remote control device or a set-top box for a television."

III. LEGAL STANDARD

In *Alice*, the Supreme Court articulated a two-step analysis for determining patent eligibility under § 101. *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 134 S. Ct. 2347, 2355 (2010). First, the court must determine "whether the claims at issue are directed to [a] patent-ineligible concept," such as an abstract idea. *Id.* Although previously often handled in a summary manner, the Federal Circuit recently emphasized the importance of this step of the analysis, explaining that the first *Alice* step "plainly contemplates that the first step of the inquiry is a meaningful one, i.e., that a substantial class of claims are *not* directed to a patent-ineligible concept." *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1334 (Fed. Cir. 2016). If the claims are directed to an abstract idea, the second step of the *Alice* analysis calls for the court to "consider the elements of each claim both individually and 'as an ordered combination' to determine whether [the claims contain] an element or combination of elements that is 'sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [abstract idea] itself.'" *Alice*, 134 S. Ct. at 2355. The Federal Circuit recently emphasized that defendants cannot prevail on the second step simply by showing that each individual claim element was "known in the art" or conventional. *Bascom Glob. Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1349 (Fed. Cir. 2016). Even where individual elements are conventional technologies, the specific arrangement of conventional technologies can also form the inventive concept. *Id.* at 1350.

"At the motion to dismiss stage a patent claim can be found directed towards patent-ineligible subject matter if the only plausible reading of the patent must be that there is clear and convincing evidence of ineligibility." *JSDQ Mesh Techs. LLC v. Fluidmesh Networks, LLC*, No. 16-CV-212-GMS, 2016 WL 4639140, at *1 (D. Del. Sept. 6, 2016).

IV. ARGUMENT

A. Claim Construction Is Necessary to the § 101 Analysis.

Although claim construction is not always required, "it will ordinarily be desirable—and often necessary—to resolve claim construction disputes prior to a § 101 analysis, for the determination of patent eligibility requires a full understanding of the basic character of the claimed subject matter." *Bancorp Servs., L.L.C. v. Sun Life Assur. Co. of Canada*, 687 F.3d 1266, 1273–74 (Fed. Cir. 2012). Here, the parties have not conducted discovery, and claim construction has yet to begin. Amazon's motion does not mention claim construction, much less meet its burden to prove that the only plausible reading of the patents-in-suit is clear and convincing evidence of ineligibility. *See JSDQ Mesh Techs.*, 2016 WL 4639140, at *1. In fact, Amazon's own arguments show that claim construction *is* necessary. For example, Amazon asserts that the claims "do not recite specific technical solution[s]" because claim 1 of the '021 patent is "agnostic as to how the 'soliciting' and 'refining' steps are accomplished." Mot. at 6–7. Amazon further asserts that the claimed "client device" is not described "with any specificity." *Id.* at 7. These assertions necessarily implicate the meaning and scope of at least these terms.

Amazon also makes arguments relating to the meaning and scope of other critical terms, including "navigation query." *Id.* at 5. This term is common to all three asserted patents and is expressly defined in the specification (and should be construed) as follows: "A 'navigation query' means *an electronic query, form, series of menu selections*, or the like; being structured appropriately so as to navigate a particular data source of interest in search of desired information." '021 patent at 8:55–58 (emphasis added). The specification discloses various embodiments of the navigation query, including a query using a formal database query language such as Standard Query Language (SQL), or a "more user-friendly interactive front-end, such as a series of menus and/or interactive forms to be selected or filled in." *Id.* at 8:63–9:9. It is thus

clear that the term "navigation query," when construed properly, places meaningful limits on the claims and is relevant to at least the Court's second-step determination of whether the claims preempt or are an application of the alleged abstract idea.

Amazon's contrary assertions at best raise claim construction issues that cannot be resolved on a Rule 12(b)(6) motion. Because Amazon has not and cannot meet its burden to show that *the only plausible reading* of the patents is clear and convincing evidence of ineligibility, its motion should be denied on this basis alone.

B.   Underlying Questions of Fact Preclude Judgment on the Pleadings.

Analysis of patentable subject matter under § 101, "while ultimately a legal determination, is rife with underlying factual issues." *Ultramercial, Inc. v. Hulu, LLC*, 722 F.3d 1335, 1339 (Fed. Cir. 2013), *vacated on other grounds*, *WildTangent, Inc. v. Ultramercial, LLC*, 134 S. Ct. 2870 (2014). For example, "analyzing whether something was 'conventional' or 'routine' involves analyzing facts." *Id.* And "any inquiry into the scope of preemption—how much of the field is 'tied up' by the claim—by definition will involve historic facts: identifying the 'field,' the available alternatives, and preemptive impact of the claims in that field." *Id.*

Here, multiple factual issues preclude dismissal, including, for example, issues related to "preemption, questions of patentability, or whether [the claims are] directed to a technological improvement rather than a generic computer implementation of an abstract idea that preclude the court from determining that the challenged claims are patent-ineligible." *JSDQ Mesh Techs*, 2016 WL 4639140, at *4. Other factual issues precluding dismissal include:

- identification of the relevant field and how much of this field is "tied up" by the claims;
- whether there are other methods of performing the purported abstract idea that would

not infringe the asserted claims;[4] and

- whether the limitations of each asserted claim, when considered individually or as an ordered combination, were "well-understood, routine, or conventional" as of the date of the inventions.[5]

These factual issues are necessary predicates to Amazon's arguments, but Amazon either provides only conclusory attorney argument or simply ignores them. For example, Amazon baldly asserts that "receiving," "rendering" and "transmitting" are "basic computing functions," but provides no support for such factual assertions. Mot. at 11. Nor has Amazon made a factual showing of preemption. Amazon's conclusory factual assertions that the patents do not provide technical solutions and "unduly preempt a wide range of existing technologies and future discoveries" (Mot. at 18) are insufficient. Indeed, these factual assertions are contradicted by the patent specifications, which describe the deficiencies in existing navigational systems for browsing electronic databases, and the "growing need for information navigation technology that allows relatively naïve users to navigate and access desired data by means of natural language input." '021 patent at 1:15–2:24. The specification also describes other specific needs, set forth above, and states that "[t]he present invention addresses [these] needs by providing a system, method, and article of manufacture for navigating network-based electronic data sources in response to spoken input requests." *Id.* at 2:27–67.

The Court "must take the specification's statements about the purported invention to be true," and is "not free to accept [Amazon's] contrary attorney argument" that the claims are directed to conventional means. *MAZ Encryption Techs. LLC v. Blackberry Corp.*, No. 13-304-LPS, 2016 WL 5661981, at *5 (D. Del. Sept. 29, 2016). Accordingly, the Court cannot

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[4] Amazon's and the other defendants' infringing systems which adopted the Siri technology are not relevant to this inquiry.

[5] Amazon does not even attempt to argue that the claims can be performed solely by the human mind. That is because the claims are directed to methods and systems for navigating *electronic* data sources, and must be implemented on a computing system with specific hardware and software. There is thus no dispute that the claims cannot be performed solely by the human mind.

determine that there is *no set of facts* under which the claims could be patent-eligible.

C.   Amazon Has Failed to Clearly and Convincingly Demonstrate that Any of the Asserted Claims Are Invalid Under § 101.

1.   The Asserted Claims Are Directed to Technological Solutions Specific to Navigating Electronic Data Sources

The patents describe in detail the background of the invention and the needs that the inventors sought to address. *See supra* section II.B & '021 patent at 1:15–3:6. They explain that the claimed inventions address these needs "by providing a system, method, and article of manufacture for ***navigating network-based electronic data sources*** in response to spoken input requests." '021 patent at 2:27–30 (emphasis added). The claimed inventions also resolve errors and ambiguities in a "user-friendly manner" by means of a "multi-modal dialogue," which gleans information from the initial interpretation of the user's spoken request to construct a navigation query, solicits additional clarification information from the user as necessary via multimodal input to refine the navigation query, and repeats this process until the desired information is retrieved from the electronic data source and transmitted to the user device. *Id.* at 2:44–67. This is precisely the technology that led to the development of Siri, and which has since revolutionized the way humans interact with electronic devices.

Accepting the allegations of the complaint and descriptions of the claimed inventions from the intrinsic record as true, and drawing all reasonable inferences in favor of IPA, the asserted claims can only be read as providing a technological improvement or solution specific to navigating network-based electronic data sources. This fits squarely within the scope of patentable subject matter under § 101. *Alice*, 134 S. Ct. at 2358 (claims that "solve a technological problem" or "improve[] an existing technological process" and eligible under § 101); *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245 (Fed. Cir. 2014) (claims are patent eligible where "the claimed solution is necessarily rooted in computer technology in order to

overcome a problem specifically arising in the realm of computer networks").

In its recent *Enfish* decision, the Federal Circuit reversed a district court invalidity ruling regarding a "self-referential" database patent on the grounds that the claims were directed to the abstract idea of "storing, organizing, and retrieving memory in a logical table," or, more simply, "the concept of organizing information using tabular formats." *Enfish*, 822 F.3d at 1337. The Federal Circuit held that "describing the claims at such a high level of abstraction and untethered from the language of the claims all but ensures that the exceptions to § 101 swallow the rule." *Id.* The Federal Circuit further criticized the district court's analysis because it "oversimplified" the claims and "downplayed the invention's benefits" disclosed in the specification. *Id.* at 1337-38. Amazon offers a similarly incorrect oversimplification. It strips out the actual elements of the claims to point to a broad abstract idea untethered to the actual elements of the asserted claims.

Numerous district courts have applied *Enfish*'s and *DDR Holdings*' analysis to find that claims directed to specific improvements in computer capabilities are not abstract.[6] Indeed, just a couple weeks ago, one such court issued a decision upholding the patentability of a patent claim directly analogous to the claims at issue here. In *InfoGation Corp. v. ZTE Corp.*, No. 16-cv-01901-H-JLB (S.D. Cal. Mar. 27, 2017) (attached as Exhibit 4), the patent at issue related a mobile real-time navigation system. The specification described the problems with the existing

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[6] *See, e.g.*, *Network Congestion Sols., LLC v. United States Cellular Corp.*, 170 F. Supp. 3d 695, 705 (D. Del. 2016) (claims directed to "alleviating congestion in a communication network" and "recite steps used to perform the method for a flow of data to and from end user devices connected to a network through communication devices" not abstract); *JDS Techs., Inc. v. Exacq Techs.*, No. 15-10387, 2016 WL 3165724, at *7 (E.D. Mich. June 7, 2016) (claims directed to "controlling when and how external devices are allowed to operate within a video surveillance system that includes software" not abstract because "[t]he technological solution presented is inexorably tied to computer technology"); *Iron Gate Sec., Inc. v. Lowe's Companies, Inc.*, No. 15-CV-8814 (KBF), 2016 WL 4146140, at *12 (S.D.N.Y. Aug. 3, 2016) (claims "directed to particular improvements over prior art multimedia data indexing techniques"; "At least on the face of the patent, this is a real invention designed to solve a problem, not mere implementation of the abstract idea").

real-time navigation systems, and stated that the invention sought to "remedy these problems in the prior art systems by using a generic natural language description to specify the optimal routing information that is generated at the server and then transmitted from the server to the client." *Id.* at 5. The only claim at issue claimed:

> A mobile navigation system comprising:
>
> a navigation computer;
>
> a wireless transceiver coupled to said navigation computer for connecting with a navigation server, said navigation server for calculating optimal routes based on real-time information, said optimal routes being formatted using a non-proprietary, natural language description;
>
> a mapping database coupled to said navigation computer for reconstructing said optimal route from said non-proprietary, natural language description; and
>
> a display screen coupled to said navigation computer for displaying said optimal route using said mapping database.

Id. at 6.

The court rejected defendants' characterization of the claim as merely directed to "providing directions in a natural language," holding that when properly characterized in light of the specification, it is clear that the claim is "directed to a specific improvement to an existing technological process rather than an abstract idea." *Id.* at 13. The court further rejected defendants' argument that the claim merely "describes the desired outcome of providing directions in a natural language without reciting the technical manner in which this is achieved, holding that there is ***no requirement*** that a claim related to computer technology must be "tied to some specific algorithm in either the claim language itself or the specification" in order to be patentable under § 101. *Id.* at 14-15 & n.8 (emphasis added). Because the claim is confined to a "particular technologic solution to identified technical problems within mobile navigation systems," it is not directed to an abstract idea. *Id.* at 15 (citing *Amdocs (Israel) Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288, 1301 (Fed. Cir. 2016) (finding claim patent-eligible where it

recited a "technological solution to a technological problem specific to computer networks")).

The same analysis applies here. Contrary to Amazon's assertions, the claims are not directed to the idea of simply "responding to spoken requests." Mot. at 3. This is precisely the type of extreme over-simplification rejected in *Enfish* and *InfoGation*. In fact, Amazon readily admits in its motion that the only way to characterize the claims as such is by "stripp[ing]" the essential claim language. Mot. at 11. This is improper.[7] It is clear from the face of the patents that the claimed inventions are directed to specific improvements in existing technological processes—namely, navigating network-based electronic data sources. In particular, even the broadest of the claims contemplate a specific solution to the problems identified in the specification. For example, claim 1 of the '021 patent specifically recites a series of steps for how to resolve ambiguities created by trying to merely "respond to spoken requests." The claim sets forth a particular solution involving the use of structured navigation queries and the solicitation of additional input in a different form in order to refine the query. The claims are necessarily rooted in computer technology and present unique solutions for quickly and efficiently navigating increasingly large and complex electronic databases via natural language requests, as opposed to requiring users to conform to the step-by-step, hierarchical menu structures found in navigational systems existing at the time of the invention. The claimed inventions further resolve errors and ambiguities in spoken input in a user-friendly manner by engaging the user in a multi-modal dialogue.

For example, as expressly stated in the specification and the claims, the '021 patent discloses specific and narrow methods and systems for speech-based navigation of an *electronic*

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[7] *See Enfish*, 822 F.3d at 1334, 1337-39; *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1313 (Fed. Cir. 2016) ("courts 'must be careful to avoid oversimplifying the claims' by looking at them generally and failing to account for the specific requirements of the claims").

data source located on one or more remote *network servers*. In addition to the electronic data source and remote network server(s), claim 27, for example, requires at least a portable microphone to receive a spoken request, language processing logic (e.g., specialized software) to interpret the request, query construction logic to construct the navigation query in response to the rendered interpretation, user interaction logic to solicit input from the user including via non-spoken modality, query refining logic to refine the navigation query based on the additional user input, navigation logic to select a portion of the electronic data source using the navigation query, and electronic communications infrastructure for transmitting the selected electronic data from the server to the user display device. '021 patent, claim 27. This is not abstract.

Amazon's assertions that the patents only claim desired outcomes without providing any limiting detail (Mot. at 11-12) misstate the claims. For example, Amazon argues that the "soliciting input from the user" and "refining the navigation query" limitations from claim 1 of the '021 patent are "only results" with no way to accomplish them. Mot. at 11-12. This oversimplified, piecemeal analysis of the individual claim limitations is improper on its face. The claims must be considered *as a whole*. *Enfish*, 822 F.3d at 1335 ("The 'directed to' inquiry, therefore, cannot simply ask whether the claims *involve* a patent-ineligible concept. … Rather, the 'directed to' inquiry applies a stage-one filter to claims, considered in light of the specification, based on whether 'their character as a whole is directed to excluded subject matter.'"). Moreover, as the court correctly held in *InfoGation*, there is *no requirement* that claims related to computer technology must be "tied to some specific algorithm in either the claim language itself or the specification" in order to be eligible under § 101. *InfoGation*, slip op. at 15 & n.8; *see also Amdocs*, 841 F.3d at 1299-1304 (upholding eligibility of claims where limitations recited "computer code for" performing various functions, such as "computer code

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for collecting network communications usage information…"). Indeed, the claims here are more detailed and specific than the claim at issue in *InfoGation*. And as in *InfoGation*, the claims here are confined to a "particular technologic solution to identified technical problems [for navigating electronic data sources]"—they are "not directed to some abstract result or effect." *Id.* at 14-15.

The cases relied on by Amazon are easily distinguishable. In *Affinity Labs of Texas, LLC v. DIRECTV, LLC*, 838 F.3d 1253 (Fed. Cir. 2016), the claim was "not directed to the solution of a 'technological problem,'" nor was it "directed to an improvement in computer or network functionality." *Id.* at 1262. Instead, the patent claimed "the general concept of out-of-region delivery of broadcast content." *Id.* Likewise, in *Apple, Inc. v. Ameranth, Inc.*, 842 F.3d 1229, 1241 (Fed. Cir. 2016), the claims were directed to the abstract idea of "generating menus with certain features," and were "not directed to a specific improvement in the way computers operate." *Id.* at 1241. Here, by contrast, the claims are directed to improvements in navigating electronic data sources via spoken input, and for resolving errors and ambiguities in that spoken input by engaging the user in a multi-modal dialogue. As specifically described in the specification, the claims improve on the then-existing electronic data navigation systems which were not designed for browsing via natural spoken commands, but rather assumed text and mouse-click inputs, and sometimes even less. Contrary to Amazon's assertions, the claims do not simply describe a function or outcome—the claims disclose specific and narrow methods and systems which require specific computer hardware and software, as discussed above.

Nor are the claims merely directed to the well-known abstract ideas like "collecting, displaying, and manipulating data," as in *Intellectual Ventures I LLC v. Capital One Fin. Corp.*, 850 F.3d 1332 (Fed. Cir. 2017), or collecting, recognizing, and storing data as in *Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat. Ass'n*, 776 F.3d 1343, 1347 (Fed. Cir.

2014). Rather, claim 1 of the '021 patent, for example, claims a method for speech-based navigation of a remote electronic data source, and requires, *inter alia*, receiving and interpreting a spoken request, *constructing a navigation query* based on that interpretation, *soliciting additional input* from the user, including user interaction in a non-spoken modality different from the original request (i.e., engaging the user in a *multi-modal dialogue*), *refining the navigation query* based on the additional input solicited, using the refined navigation query to select the appropriate portion of the data source, *and then* transmitting the selected portion to the client device. This is much, much more than simply collecting and organizing data.

Because Amazon's characterization "does not tie adequately the claim language to the purported abstract concept," it fails to meet its burden to show that the claims, when properly considered as a whole, are drawn to an abstract idea. *PNC Bank*, CBM2014-00100, 2014 WL 4537440, at *12 (Sept. 9, 2014). The § 101 inquiry ends here, and its motion should be denied.

2. Amazon Has Not Met Its Burden to Show the Claims Preempt the Alleged Abstract Idea and Lack Inventive Concept.

a. The Claim Limitations Considered as an Ordered Combination Provide Inventive Concept.

The Federal Circuit has made clear that a defendant cannot prevail on the second step of the *Alice* analysis by only showing that each individual claim element is "known in the art" or conventional. *Bascom*, 827 F.3d at 1349-50. Nor does "the invention's ability to run on a general-purpose computer doom[] the claim." *Enfish*, 822 F.3d at 1338. "The key to this inquiry is whether the claims tie the otherwise abstract idea to a *specific way of doing something with a computer*, or a specific computer for doing something; if so, they likely will be patent eligible." *CLS Bank Int'l v. Alice Corp. Pty.*, 717 F.3d 1269, 1302 (Fed. Cir. 2013) (emphasis added).

For example, *Bascom* involved a patent for "filtering Internet content." The district court, in concluding that the claims lacked inventive concept, "looked at each limitation individually,"

found that that the limitations "local client computer," "remote ISP server," "Internet computer network," and "controlled access network accounts" were described in the specification as "well-known generic computer components." 827 F.3d at 1349. The Federal Circuit, however, *rejected* this analysis and reversed. The Federal Circuit held that the claims contained inventive concept—and were thus patentable—because they "recite[d] a specific, discrete implementation of the abstract idea of filtering content." *Id.* at 1350. Although "[f]iltering content on the Internet was already a known concept, [] the patent describes how its particular arrangement of elements is a technical improvement over prior art ways of filtering such content." *Id.*

Similarly, in *Amdocs*, the Federal Circuit upheld claims for processing network accounting information that required "arguably generic components, including network devices and 'gatherers' which 'gather' information," because the "generic components operate in an unconventional manner to achieve an improvement in computer functionality." 841 F.3d at 1300–01. The court further found that the "arrangement is not so broadly described to cause preemption concerns," but "is narrowly circumscribed to the particular system outlined." *Id.* at 1302. Similarly, with respect to method claims for generating a single record reflecting multiple services for accounting purposes, the court found that while the components and functionality involved (e.g., ISMs, gatherers, network devices, collection, aggregation, and enhancement) "may be generic at first blush, an examination of the claim in light of the written description reveals that many of these components and functionalities are in fact neither generic nor conventional individually or in ordered combination." *Id.* at 1306. "Instead, they describe a specific, unconventional technological solution, narrowly drawn to withstand preemption concerns, to a technological problem." *Id.*

Despite this clear precedent, Amazon pursues the same analysis rejected by the Federal

Circuit. It argues that the patents lack inventive concept because the claims purportedly recite well-known conventional technology. Mot. at 15-16. For example, Amazon points out that the "speech recognition" step can be performed with "speech recognition engines [] readily available on the market." Mot. at 15 (citing '021 patent at 7:20–22). But the fact that some of the individual claim limitations may utilize conventional devices does not render them ineligible— the patents are not directed to, for example, methods and systems for speech recognition.

Rather, the claims disclose specific methods and systems for navigating network-based electronic data sources in response to spoken input requests, and to feedback mechanisms and methods for resolving the errors and ambiguities that may be associated with such requests. '021 patent at 27–30. For example, the elements of claim 1 of the '021 patent, when properly considered individually *and* as an ordered combination, describe a specific method for speech-based navigation of an electronic data source, the electronic data source being located at one or more network servers located remotely from a user. The method claims a "specific way of doing something" with specific computer machinery and software, including at least an electronic data source, a networked server, and a client device. The claims further provide a novel multi-modal feedback approach to resolving errors and ambiguities in interpreting the original spoken command. This inventive concept is even more apparent in light of the specification, which describes the then-existing electronic data navigation systems which were not designed for browsing via natural spoken commands, but rather assumed text and mouse-click inputs, or in the case of TV remote controls, even less. '021 patent at 1:47–54; *see, e.g.*, *Bascom*, 827 F.3d at 1349-50 (Although "[f]iltering content on the Internet was already a known concept, [] the patent describes how its particular arrangement of elements is a technical improvement over prior art ways of filtering such content."). The amendments in the prosecution history to distinguish the

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inventions over the prior art further demonstrate that the inventions are directed to a specific way of doing something with a computer and do not preempt the entire field.

Amazon's proffered analysis of the claims as an ordered combination is deficient. According to Amazon, the recited steps of receiving, interpreting, transmitting a response back to the user are "inherent to the basic concept of responding to a spoken request from a user." Mot. at 17. But the claims do not simply recite receiving, interpreting, and transmitting. Amazon ignores essential claim elements including constructing a navigation query based on the interpretation of the spoken request, soliciting additional input from the user, including user interaction in a non-spoken modality different from the original request and without requiring the user to request said non-spoken modality (the "multi-modal dialogue"), refining the navigation query based on the additional input, using the refined navigation query to select a portion of the electronic data source, and then transmitting the selected portion from the network server to the client device. Amazon's insistence that *individual limitations* are conventional presents the wrong analysis. *Bascom*, 827 F.3d at 1350. Amazon's assertion that the limitations are device "agnostic" also does not render them ineligible. *See, e.g.*, *Card Verification Sols., LLC v. Citigroup Inc.*, No. 13 C 6339, 2014 WL 4922524, at *4 (N.D. Ill. Sept. 29, 2014) (denying § 101 motion even though claims were "device agnostic" and recited no specific machinery; "[a] plausible interpretation of the patent is that computing devices, software, keyboards, and credit card readers would be required to use the invention").

As in *DDR Holdings*, *Bascom*, and *Amdocs*, the claims "recite[] a technological solution to a technological problem specific to computer networks—an unconventional solution that was an improvement over the prior art." *Amdocs*, 841 F.3d at 1303. The asserted patents thus provide the requisite inventive concept under *Alice*.

b. The Asserted Claims Do Not Preempt Use in All Fields.

The patents claim specific methods and systems for navigating network-based electronic data sources in response to spoken input requests. They "do not attempt to preempt every application of the idea[,] … [r]ather, they recite a specific way to [perform the idea]" in order to improve on existing technology in the field of navigating electronic data sources. *See DDR Holdings*, 773 F.3d at 1259. The claim limitations require specific hardware and/or software, discussed above, and are sufficiently specific to ensure that the patent will not preclude the use of all methods of the alleged abstract idea of responding to a spoken request. *See, e.g.*, *Network Congestion*, 170 F. Supp. 3d at 705 (claims addressing "the problem of 'network congestion' in a defined [computer] environment, which includes end user devices and communication devices" provided the requisite degree of specificity to "alleviate concerns of pre-emption").

Even assuming the claims were directed to Amazon's purported abstract idea of "responding to a spoken request"—which they are not—Amazon has not and cannot show that the claims preempt all ways of responding to spoken requests. Indeed, the specifications and prosecution history amendments, including those relating to the multi-modal dialogue, show that the claims do *not* preempt. Moreover, Amazon's assertions that the patents "contribute nothing to the public store of knowledge" and merely "claim the end result" of others' efforts (Mot. at 18) are wrong. As discussed above, the inventors of the asserted patents were engaged in fundamental research and development related to personal digital assistants and speech-based navigation of electronic data sources, which ultimately resulted in the patents-in-suit and led to the groundbreaking development of Siri.

V. CONCLUSION

For the foregoing reasons, Amazon's motion to dismiss should be denied.

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Of Counsel:

Marc A. Fenster
Brian D. Ledahl
Adam S. Hoffman
Amir A. Naini
Shani Williams
Russ August & Kabat
12424 Wilshire Boulevard 12th Floor
Los Angeles, CA 90025-1031
(310) 826-7474
mfenster@raklaw.com
bledahl@raklaw.com
ahoffman@raklaw.com
anaini@raklaw.com
swiliams@raklaw.com

BAYARD, P.A.

/s/ *Stephen B. Brauerman*____
Stephen B. Brauerman (sb4952)
Sara E. Bussiere (sb5725)
222 Delaware Avenue, Suite 900
Wilmington, DE 19801
(302) 655-5000
sbrauerman@bayardlaw.com
sbussiere@bayardlaw.com

Attorneys for Plaintiff,
IPA Technologies, Inc.